System Configuration Team (SCT)

Reasonable & Prudent Measure #26
Meeting Notes
March 17, 1999

Greetings and Introductions.

The March 17 meeting of the System Configuration Team was held at the National Marine Fisheries Service offices in Portland, Oregon. The meeting was co-chaired by Bill Hevlin of NMFS and Jim Ruff of the Northwest Power Planning Council staff, and was facilitated by Donna Silverberg. The agenda and a list of attendees for the March 17 meeting are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

I. Discussion of the ISAB's Reports "Overview of the Corps Capital Construction Program" and "Adult Passage" and the Council Staff Report "Review of the Corps' CRFM."

Silverberg introduced Phil Mundy of the ISAB, who provided a briefing on the ISAB's overview report on the Corps' Capital Construction Program. Mundy touched on the definition of the assignment to the ISAB, the original direction from Congress, the schedule for this effort, the policy context for the review, the potential system configurations considered, the biological effectiveness of proposed actions, common issues and guiding principals, the ecosystem approach, and biodiversity issues and questions. Mundy worked from a series of overheads, attached as Enclosure C; please refer to this document for highlights of Mundy's presentation.

The list of commonalities and principals identified in the ISAB's overview report include the following:

1. **SPILL**: the general principal is that all juvenile passage alternatives should be evaluated against the baseline of spill. The reason for that, Dr. Williams explained, is that spill more closely mimics natural situations and ecological processes than do other routes of passage. Spill should be considered as an alternative when the improvements anticipated from other bypass technologies are not large enough to meet other passage goals.
2. **OPTIONS ARE INTERRELATED**: The efficacy of any bypass technology at a project is a function of the potential success of alternative measures for improving survival of juvenile salmon.
3. **LONG-TERM vs. SHORT-TERM GOALS**: The Corps' program is largely focused on the short term, whereas salmon recovery requires a long-term perspective as well. The standard sequence of proposal, study design and implementation (with bidding and construction schedules) is too slow and inflexible for salmon recovery.
4. **BIODIVERSITY**: Biodiversity of salmon and steelhead stocks may not be protected by the intake screen systems in use or by other planned technologies. There is ample evidence that the collection efficiency of each bypass system varies by species, life history type and population.
5. **INCONSISTENT MEASURES OF PERFORMANCE**: There is a critical clash of performance measures between the upper-river salmon restoration programs and Corps mainstem passage programs. Upper river programs (ESA actions) employ performance criteria focused on sizes of individual stocks or spawning populations, while the hydroelectric management decisions are based on averages for all stocks combined that are weighted toward the most abundant species and stocks. The principal we see is the need for the common "currency" of stock-specific performance for measuring the performance of system improvements. Stock-specific performance is the ideal standard, however technically challenging it may be to attain.
6. **MORE EMPHASIS IS NEEDED ON ADULT PASSAGE**: The Corps' capital program gives insufficient attention to adult salmon and steelhead. More attention should be given to identifying and correcting adult passage problems. The principal we see here is that the few returning adults represent the survivorship of many thousands of initial smolts, and they should be given higher priority than they have in the past.
7. **SCHEDULING SALMON RECOVERY MEASURES**: The question of what ***most*** needs to be done for fish passage (juvenile and adult) seems to have been slighted in deference to the ongoing momentum of existing projects and funding cycles. The concept that clear criteria based on biological needs for successful fish passage are required to do the sort of prioritization among projects over time required by the Congressional mandate. The lack of agreed-upon technical criteria, combined with a wide diversity of opinion, both confuses the implementation of policies and leads to seemingly duplicative efforts.
8. **THE IMPORTANCE OF PREMISES AND HYPOTHESES**: An explicit statement of biological premises is a valuable aid for efficient development of fish passage technologies. The premises and assumptions form **testable hypotheses** that clearly guide further research and development, thus reducing both simple trial-and-error approaches and the tendency to keep making relatively minor adjustments to existing technologies without a good biological basis. We advise that all projects be made to list their premises explicitly and to summarize the evidence in support of those premises before construction

and testing of prototypes proceeds.

9. **SITE SPECIFICITY vs. GENERAL SOLUTIONS**: Application of the biological principals of fish behavior and physiology has been subsumed under questions of building structures to fit the features of a particular dam. The principal here is to foster a design process that meets the generic needs of fish first, then adjusts the design to the specific characteristics of the dam secondarily. Put emphasis on the commonality of purpose and function first. We suspect that a more cost-efficient process of dam modification for fish passage can result.
10. **DIVERSION vs. DESTINATION**: In planning bypass options, the methods of diverting smolts at dams should be separated from the destination of the fish after the dam is bypassed, as well as from the particular downstream purposes, such as transportation, the diversion might serve. The principal is that the method of diversion of smolts does not necessitate any particular destination following diversion.

The overview report also includes the following conclusions in response to specific questions from the Power Planning Council:

1. How does the concept of fish passage facilities at mainstem dams fit within the context of the Columbia River ecosystem?

Conclusions:

- Passage facilities at mainstem dams belong within the context of the Columbia River ecosystem only to the extent that they permit the successful completion of the life cycle of the full diversity of the basin's native and anadromous fishes.
- Passage must be successfully completed within the normal time period; because delay may be a critical problem.
- Whenever dams are to coexist with anadromous fishes, it is essential that facilities are engineered to make fish passage as normal as possible.

2. **What is the record of effectiveness of fish passage facilities to mitigate for the effects of mainstem hydroelectric dams**?

Conclusions:

- No one really knows all of the effects of the hydroelectric system.
- Short-term survival during passage appears to be reasonably good for some species and life cycle stages and not for others.
- Fish passage facilities are not equally effective for all anadromous species.
- It is perplexing that gains in short-term survival within the hydroelectric system have yet to be translated into long-term increases in adults in the fisheries and on the spawning grounds.

3. **How have these facilities contributed to meeting salmon recovery goals**?

Conclusions:

- Salmon recovery goals, including run doubling and recovery of listed species, are not being accomplished.
- The effectiveness of fish passage measures on long-term survivals has yet to be demonstrated, so the effectiveness of fish passage facilities in meeting salmon recovery goals remains to be seen.
- To this point in time, the most that can be said is that hydroelectric fish passage measures appear to have prevented the immediate extirpation of a subset of the anadromous fish so far studied.

4. **What are the positive impacts of fish passage facilities**?

Conclusions:

- Wholesale extirpations of anadromous fish species have been avoided.
- When the standard comparison is passage through turbines, there has been a marked improvement (positive) in short-term survival of juveniles for spring chinook, for coho, for steelhead and, to a lesser extent, for fall chinook and sockeye.
- When the standard of comparison is the natural river, it is not clear that fish passage facilities have had any positive effects beyond prolonging the process of extirpation.

5. **What negative impacts have the facilities incurred**?

Conclusions:

- Fish passage facilities work best for adult salmon and large juvenile salmon. Any migratory fish species that falls outside the design criteria of the fish passage facilities is selected against.
- Each species is selected against in inverse proportion to the degree that it is adapted to the passage device.
- The standard of measure for judging positive and negative impacts has to be the survival and passage rate in the free-flowing reach that once sustained salmonid populations.

6. **What are the major uncertainties or research questions associated with improving mainstem passage**?

Conclusions:

- The biological standard to which actions should be held
- an adequate knowledge of fish behavior and its use in designing fish passage facilities
- the accuracy of salmon counts at dams
- the effects of temperature on fish passage
- the long-term effects of hydroelectric system passage on juveniles and adults.

7. **How does the existing level of scientific uncertainty affect the use and management of mainstem fish passage measures**?

Conclusions:

- Present uncertainties, the resistance of the region to identifying uncertainties, and the inability to resolve known uncertainties have, in hindsight, fostered misguided passage approaches and slowed the development of new approaches.
- Fish passage could be much more effective if more were learned about basic aspects of fish behavior that control the effectiveness of fish passage devices.
- Uncertainties over the levels of short-term survival for juvenile spring chinook and steelhead in passing through the Snake River into the Lower Columbia River have led to some uncertainty about approaches to mitigation for the effects of hydroelectric passage.
- Uncertainty with regard to the dam counts for some species of salmon has led to overharvest of these species in the ocean.
- Uncertainty or false certainty about the effects of adult passage on spawning success may have led the region to underestimate the importance of evaluating and improving adult passage measures.

With regard to the "spill" portion of your "Commonalities and Principals" section, said Hevlin, does that mean the ISAB is suggesting that the first priority should be spill? We don't set priorities, Mundy replied – what we're talking about is an approach to figuring out the prioritization process. All we're saying is that spill is an example of something that fits two areas that we think are supportive of keeping fish alive in the system – basically, it mimics natural situations and ecological processes. Dick Whitney of the ISAB said it was the group's intention that the effectiveness of other fish passage improvements should be measured against the yardstick of spill.

With regard to your definition of spill, said BPA's John Rowan, are you saying that the most biologically effective passage means is moving fish past the dams through the upper portion of the water column? Because there are other means of moving fish past the project which leave them in the upper portion of the water column, which may not fit the classic definition of spill, such as surface bypass, Rowan said.

We looked at surface bypass as a way of reducing the cost of spill, and the volume of water required to move the fish past the dams, Mundy replied. Also, we're not looking so much at moving the fish in the upper portion of the water column as we are at leaving the fish where they want to be.

With regard to the "Options are interrelated" point in the "Commonalities and Principals" section of the report, the Corps' Witt Anderson said that, in the ISAB's briefing to the Council, someone made the statement that we're not looking at all of the appropriate technologies that are available to pass fish. What is out there that the ISAB sees that we're not doing? Anderson asked. My observation is that the ISAB's reports are pretty thin on suggesting applied, practical measures above and beyond what we're already doing, Anderson said. You look at five controversial measures, and you endorse four of them pretty much lock, stock and barrel. While I think the principals you raise are good ones, now we have to translate those principals into applied measures to improve passage. If there are options we're not currently looking at, that we

should be, I'd like to know what they are, said Anderson.

Our objective was to provide some context for the SCT's and the Corps' efforts, Whitney replied. One of the things we talk about in the report is the importance of premises and hypotheses, and we do complement the people involved at the ground-truth level for developing such approaches, particularly with respect to surface bypass evaluations. We think that's one kind of approach that deserves broader application, Whitney said. It wasn't our intent to lay out what those premises ought to be, beyond saying that the focus should be on the natural behavior of the fish.

Mundy said one of the specific things identified in the ISAB report is the use of turbulent flow to attract fish. There are indications that there may be alternative ways to get fish into surface bypass systems, and the ISAB didn't see a lot in the way of research into the physiological response of fish to flow. There is also at least some research that indicates that the degree of smoltification has a lot to do with how the fish react to various guidance measures, said Mundy.

I think this is a good effort by the ISAB, said Ron Boyce; we should probably spend a few minutes talking about how the SCT will address and utilize the recommendations in this report. One specific criticism we've heard is that the CRFM program is not utilizing a true ecosystem approach to improving fish passage in the system, particularly in the sense that it is focusing on non-drawdown technologies. I think it needs to be acknowledged in the ISAB's review that the CRFM program is looking at dam breaching alternatives in both the Snake and Columbia Rivers, which, if implemented, will provide more of an ecosystem approach, said Boyce. That's part of this program, Boyce said, and it seems to me, in reading through the ISAB's report, that your review doesn't really acknowledge the longer-term CRFM focus of achieving an ecosystem approach to the Columbia system.

That's true, Mundy acknowledged; the reason is that the ISAB was not asked to look at things other than the five specific projects we evaluated. We looked for evidence of an ecosystem approach in those five projects, he said, and we didn't find any.

Again, the ISAB report doesn't acknowledge the fact that many of the specific items we evaluated are short-term measures, which have a lot of limitations in terms of not fully addressing all life histories and stages, Boyce said. This Council and ISAB review needs to acknowledge the fact that there are other, longer-term measures on the table that are getting at the ecosystem question. We're doing the best we can do, given the current configuration of the hydrosystem. That's a good point, Hevlin said.

I agree, said Anderson – to be fair, the ISAB needs to be very clear that you looked at five projects only in your review, because those were your instructions from the Council. Ruff replied that the review also included the Corps' DGAS program and the surface bypass program, which are longer-term efforts. I think Ron's point is that some of the ISAB's statements are being taken out of context, said Anderson; the five projects the ISAB reviewed are only a piece of the entire Capital Construction Program.

In response to a question from Anderson, Whitney said the ISAB review did not include

the Corps' drawdown studies. That's too complex a review to be accomplished in the few months we had available, Whitney said. But isn't that a part of the policy context for the review – that you would include alternative configurations that encompass the five-dam drawdown scenario? Boyce asked. Again, it needs to be acknowledged in the ISAB's report that, because of time constraints, it was not possible to include a review of the drawdown scenarios, and that the review encompasses only the current configuration of the system.

One other point, to expand on that, said BPA's Bill Maslen – the ISAB review appears to hold the CRFM program accountable for things that are outside the scope of the CRFM. I guess my response is that all of the money comes out of the same pocket, Mundy replied; if there are situations where you could have spent an extra 3% in order to obtain an answer from a research project that would have benefitted another area of the program, I think that's what we're saying: despite whatever mandates and limitations may exist in terms of how the available monies are spent, it's crucial to look at how everything fits together when these funding decisions are made.

That is a legitimate point with regard to the regional salmon recovery effort, Maslen said; it is not necessarily a legitimate point to make about the Corps' Capital Construction Program. My comment wasn't necessarily intended as a criticism of the ISAB's efforts, Boyce said – I would simply like to be sure that the Council understands the context and limitations of this review.

Hevlin returned to the ISAB's comment that the Corps' program is largely focused on the short-term, whereas salmon recovery requires a long-term perspective as well." That's just not true, he said – we've been working on drawdown for five years, and that particular comment is kind of hard to swallow. I can see that our intent didn't come across very clearly, Whitney replied – what we're saying is that, in terms of the evaluation of measures such as extended-length screens, the Corps is focused on short-term effects: guidance efficiency and survival of juveniles. What we're trying to say is that you need to look beyond that, at the effects on adult returns, Whitney said.

I guess my overall concern is that the Council is going to put its recommendations together, based on the ISAB's review, and submit them to Congress, Anderson said. Congress will then use those recommendations to direct things in the Corps' appropriation. The ISAB looked at five controversial projects, and endorsed at least four of those. Yet your report also includes statements like "The Corps needs an entirely new conceptual foundation," said Anderson. My concern is what Congress is going to do with statements like that, he said, and I guess my question is, how do you reconcile what you said about the five projects the ISAB looked at, with these broader principals, in terms of what the SCT does, which is the task of trying to improve fish passage conditions?

I think we have a fundamental question about the biodiversity issues we're raising, Mundy replied. The question here is, is it possible for hydroelectric passage measures to support the biodiversity objectives of the recovery program? While the things the Corps is doing may benefit large fish, and may benefit certain species and life-history types, I don't think that, in the context of the short term/long term dichotomy, we have an understanding on biodiversity issues, Mundy said.

You're suggesting that there needs to be some addition to what has been looked at so far, which will provide some type of benchmark measure of the recovery of the species as it comes back? Silverberg asked. That's exactly right, Whitney replied.

I want to add that we did discuss the practical application of our review within the ISAB, Whitney continued. We wanted to be certain that Congress didn't take our report and use it as justification to cut the Corps' budget; that's the last thing we want to see happen, he said. The whole point of this exercise is to identify questions that need some further study.

Ruff suggested that one practical way for the SCT to address the issues raised in the ISAB review would be to develop criteria for the FY'00 prioritization process that encompass some of the principals the ISAB has laid down. Once we've done that, he said, perhaps it would be appropriate to hand those criteria to the ISAB for review – that way, they preserve their independent status.

Hevlin added that comments are due on the Council staff' issue paper on the ISAB review by March 29. You can comment on the ISAB review as well, he said, but it won't do any good – they aren't going to change it.

Boyce raised the question of the practical usefulness of the ISAB's review to the SCT. I think the most obvious use, as Jim said, is for us to try to incorporate some of the principals the ISAB has laid out in our project prioritization criteria, Hevlin replied. Some of what the ISAB says bears a striking resemblance to points Bob Heinith and CRITFC have been making for several years, said Hevlin – namely, that biodiversity should be more of a consideration.

I agree with Ron, said Maslen – fundamentally, they're approaching this process from a different concept, and they've left it at the concept level. Taking all of those concepts and attempting to lump them into a new set of criteria will not provide a means by which we have meaningful engagement and decision-making on actions, Maslen said. There are some fundamental policy issues that need to be dealt with before the ISAB's principals can be practically applied.

II. Criteria Development for Prioritization of FY'00 Activities.

The discussion of the ISAB review, and the incorporation of the ISAB's principals in the SCT's FY'00 prioritization criteria, segued into this agenda item. Hevlin and Ruff distributed Enclosure D, a list of proposed criteria for ranking Corps CRFM projects, based primarily on the criteria employed by the SCT in 1998.

Hevlin noted that there was a request to separate out the monitoring and evaluation criteria from the hard project criteria; the hard project criteria fall into two categories: biological effectiveness criteria, and policy/management criteria. A general discussion of this list of criteria followed, ultimately yielding the following questions for possible application in the ranking process:

- What mandate should drive the criteria? BiOp? BA?
- To what extent does a given measure benefit all species/life histories?
- Should there be separate criteria addressing the effects on listed species?
- To what extent does a given measure adversely affect other species?

The discussion then turned to the specific prioritization criteria developed by Hevlin and Ruff; eventually, the SCT agreed to use Criteria 1, 5, 6 and 7 under "Biological Effectiveness Criteria" and Criteria 6 under "Monitoring and Evaluation Criteria" in 1999. It was further agreed that, between now and the April SCT meeting, Phil Thor, Witt Anderson, Jim Ruff, Bob Heinith and whoever else wants to participate will take these five criteria and develop a proposed methodology under which they will be applied in the FY'00 prioritization process. It was also agreed that, between now and the April 22 meeting, the SCT membership will read the ISAB's overview report carefully, and come prepared to discuss the principals it lays out and their potential application to the SCT's prioritization process.

III. Summary of IT's Review and Action on The Dalles Juvenile Passage Research and Spill Plan for 1999.

NMFS' Mark Schneider said the details of the 1999 study plan at The Dalles are still somewhat up in the air; the plan is a work in progress at this point. At the March 4 IT meeting, the issue of the 1999 spill program at The Dalles was not resolved. What NMFS agreed to do is to ask the NMFS Science Center to investigate the comparative statistical precision of the within-year, 30%/64% comparison study design advocated by NMFS and the constant spill level, between-year study design advocated by other entities, Schneider said.

The preliminary result of that investigation is NMFS' draft "Research Alternatives for The Dalles Dam Juvenile Passage Survival Study," dated March 16, 1999 (attached as Enclosure E). This document lays out three study design alternatives:

- **Alternative 1** (recommended by CRITFC): evaluate relative survival differences for 64% spill, sluiceway and turbines annually. Eliminate tailrace releases. Conduct tests of lower spill volumes in future years, but test only one spill volume within a given year. Address various environmental conditions through multiple years of testing.

- **Alternative 2** (recommended by Oregon and Washington): Evaluate survival differences for 64% spill and sluiceway, with comparisons to tailrace reference releases. Conduct tests of lower spill volumes in future years, but test only one spill volume within a given year. Address various environmental conditions through multiple years of testing.

- **Alternative 3** (recommended by NMFS): Evaluate survival differences for 30% and 64% spill within a single year. Once the appropriate spill level is defined, evaluate the sluiceway in future years under a constant spill volume. Address various environmental conditions through multiple years of testing. Each treatment will have a paired tailrace

release, total of four groups.

Please see Enclosure E for details of the research products and problems associated with each of the proposed study designs, as well as the Science Center's conclusions about the various alternatives.

One issue that was raised during the IT's discussion of this topic was the feasibility of asking the ISAB to review whatever study design is chosen prior to the start of the 1999 migration and testing season, Schneider said. I think there is general agreement that there is no way for that to happen in 1999; however, there is a desire for the ISAB to look at the study design for future years. NMFS agreed to take the first cut at framing the question for ISAB consideration, said Schneider; that question will revolve around the conduct of and application of the results from project-level survival studies.

In any event, said Schneider, once this document (Enc. E) takes final form, it will be presented at the April 8 IT meeting; hopefully, we will be able to resolve the study design issue at that meeting.

How will this paper address the question of whether or not the two within-year spill levels included under Alternative 3 will confound the spillway and sluiceway survival results? Boyce asked. I'm not sure I can answer that question, Schneider replied; what I can do is convey the question to the Science Center. Also, how is the question of adult recoveries addressed in this paper? Boyce asked. Adult recoveries are addressed under the "Assumptions" section at the beginning of the paper, Schneider replied.

The group devoted a few minutes to a discussion of the various advantages and deficiencies of each of the proposed study designs; ultimately, it was agreed to postpone further discussion of this issue until the April 8 IT meeting. Silverberg asked whether any of the relevant entities have concerns about the way this paper captures their proposed study designs; Heinith replied that CRITFC will be sending a letter to Will Stelle, because there are some real problems with the way (Enclosure E) characterizes their proposal. The tribes are also going to be unhappy with the idea of using coho in this study, he said. In response to a question, Heinith clarified that the characterization of the proposal itself is accurate; what the tribes disagree with is the "Problems" analysis that follows the proposal statement.

In response to a question, Schneider explained that the Science Center white paper (Enclosure E) is primarily intended to address the statistical rigor of each of the study design alternatives. There was general agreement that there are other issues associated with the 1999 juvenile passage survival study design at The Dalles, and that a companion issue paper is probably needed to accompany the study design analysis when it is submitted for IT consideration.

The SCT identified a number of topics to be included in this issue paper; the first was the issue of spill. Spill is seen as the best passage alternative, said Hevlin; before the BiOp spill program at The Dalles is changed, there has to be concrete evidence that there is a problem with the current "more is better" program. In NMFS' view, we do have solid evidence that there are

survival problems associated with the 64% spill level at that project, Hevlin said. However, what we seem to be hearing from a number of parties in the region is that we need absolute proof before we make a change, despite the fact that, in all of our fisheries science on the Columbia River, we never have absolute proof of anything. That's the policy issue, he said – no matter how much technical discussion we have in the next few months, we're not going to be able to answer the question of what level of scientific certainty is needed before the BiOp spill program is changed at The Dalles.

Another issue, raised by Maslen, is the need to consider the spill programs at The Dalles and John Day as a package, in terms of their impacts on the stability of the transmission and generation systems.

Hevlin observed that the reason the SCT has been unable to resolve the Dalles study design issue, despite months of discussion, is the fact that most of the participants in this debate – NMFS, the tribes and the states – are arguing from underlying policy positions that cannot be compromised. We have been trying to resolve what is, at its basis, a policy question, at the technical level, he said, and the only way it's going to be resolved is at the policy level.

Another technical issue, raised by CRITFC, is the fish species to be used in the test, and the fact that, from the tribes' perspective, coho are an inappropriate species to use in this study. CRITFC also raised the policy issue of the need to re-initiate consultation on the BiOp if the RPA for The Dalles is changed.

The discussion turned to the question of which of these items are truly policy issues, and which are actually technical issues, which the IT will return to the SCT for resolution. It was agreed to reconvene the SCT/SRWG subgroup that met on February 23 to attempt to resolve some of the remaining technical issues associated with the 1999 study design at The Dalles; this small group meeting was set for March 26, from 9 a.m. to noon at NMFS' Portland offices.

IV. Review of the CRFM Program for FY'00 and Discussion of Process and Timeline for Prioritization Activities.

Anderson distributed Enclosure F, a thick packet of FY'00 preliminary work plans, which he said would form one starting-point for the SCT's FY'00 prioritization discussion. He asked the other SCT members to review this packet prior to next month's meeting. Given the fact that we have the assignment to refine the list of prioritization criteria and the methodology by which they will be replied, he said, I don't see that there is much more work we can do on this agenda item today. In response to a question, Anderson said the Corps' FY'00 budget request is $100 million.

Anderson also distributed Enclosure H, a list of additional FY'99 activities the Corps is proposing be funded using the unspent monies still available in the FY'99 CRFM budget. These items include:

- Increased hydroacoustic monitoring of Granite BGS/GAP (cost: $380,000)

- Radio telemetry for SBC residence time evaluation ($17,000)
- Initiate design of McNary trash boom ($350,000)
- Order perf plates for ESBSs at McNary, Goose, Granite ($2.3 million)
- Initiate design of additional barge mooring/purchase piling ($500,000)
- P&S for John Day smolt facility follow-on contract II & hydraulic analysis ($350,000)
- Technical, debris-handing studies for John Day ESBSs (cost TBD)

- Total: $3.897 million

Anderson asked that any comments on these items, or concerns about the Corps' moving forward with contracts for them, be provided to him within the next two weeks. Steve Rainey observed that both the BiOp and the ISAB review have called for a new experimental facility to address adult passage issues; we have talked about such a facility before, he said, but it didn't go anywhere because funding was so limited. Anderson suggested that the entire SCT be allowed an opportunity to weigh in on this project; I have some ideas about how we might advance the ball, he said, but I'm curious about how the full SCT would feel about such a facility.

V. FFDRWG Updates.

The Corps' Rebecca Kalamasz reported that the most recent FFDRWG meeting was held on March 10; there was also an SRWG subgroup meeting to look at the FY'00 adult program on March 9. No controversial issues were identified; at the SRWG meeting, some of the items discussed included an overview of the current state of research into adult survival, delay and passage problems throughout the Columbia and Snake systems, major areas of concern (fallback, delay, unaccounted loss, straying, spill, spill passage and counts), and FY'00 work plans to address these issues. Most of the latter discussion focused on study objectives, Kalamasz said. Portland District is in the process of fleshing out those FY'00 work plans, after which they will be sent out to the region for review.

The next SRWG meeting will be held on April 6 in Seattle, she added; the topic of the meeting will be transportation. Another SRWG meeting, to discuss turbine passage, bypass systems and in-river passage, is tentatively scheduled for April 22-23 in Portland. Rock Peters added that the FY'00 adult work plans should be available next week; he asked all of the SCT members to carefully review these plans, because of their importance to the SCT's work.

Peters also distributed a written summary of the items discussed at the March 1 Portland District FFDRWG meeting (Enc. G); he asked everyone to read through this document and provide any comments they may have to him.

VI. SCT Meeting Minutes.

It was agreed that the minutes from each month's SCT meeting will be emailed to the participants a week in advance of the next month's meeting; it was further agreed that the SCT minutes will be made available on the Corps' Internet homepage.

VII. Next SCT Meeting Date and Agenda Items.

The next meeting of the System Configuration Team was set for Thursday, February 22, from 9 a.m. to 4 p.m. in NMFS' Portland offices. It was agreed that the SCT's May 17 meeting will include a field trip to Bonneville, The Dalles and John Day Dams. Meeting notes prepared by Jeff Kuechle, BPA contractor.